CLASSIFICATION AND CORRELATION

OF

THE SOILS OF

PORTER COUNTY
INDIANA

OCTOBER 1978

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
MIDWEST TECHNICAL SERVICE CENTER
LINCOLN, NEBRASKA

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Midwest Technical Service Center
Lincoln, Nebraska 68508

Classification and Correlation of the Soils of Porter County, Indiana

The final correlation was conducted at the Midwest Technical Service Center in Lincoln, Nebraska. Participants in the correlation were: Franklin Furr, Party Leader; Frank Sanders; and Louie Buller. The soils handbook, laboratory data, SCS-SOILS-5 forms, field sheets and field notes were the documentation and supporting evidence reviewed during the conference.

Map symbols consist of two or three letters and a final number; as an example, Ad, BaA and MrD2. The first letter is a capital and it is the first letter of the soil name or miscellaneous area. The second letter is lower case and it is used to separate mapping units that begin with the same first letter. The third letter is a capital and it indicates the class of slope. Symbols without a slope letter are used on mapping units which do not have slope as part of the name. A final number two or three indicates the degree of erosion.

SOIL CORRELATION OF
PORTER COUNTY, INDIANA
MARCH 1978

Field symbols	Field mapping unit name	Publication symbol	Approved mapping unit name
Ad	Adrian muck	Ad	Adrian muck, drained
AgA, Ag	Alida loam, 0 to 2 percent slopes	Ag	Alida loam
BaA, NaA	Blount silt loam, 0 to 3 percent slopes	BaA	Blount silt loam, 0 to 3 percent slopes
Br	Brady sandy loam	Br	Bourbon sandy loam
BtA, Bt	Brems fine sand, 0 to 3 percent slopes	BtA	Brems sand, 0 to 3 percent slopes
ChB	Chelsea fine sand, 2 to 6 percent slopes	ChB	Chelsea fine sand, 2 to 6 percent slopes
ChC	Chelsea fine sand, 6 to 12 percent slopes	ChC	Chelsea fine sand, 6 to 12 percent slopes
De, Fu	Del Rey silt loam	De	Del Rey silt loam
DoA, DoB, Tr	Door loam, 0 to 2 percent slopes	DoA	Door loam, 0 to 2 percent slopes
Du	Dune land	Du	Dune land
Ed, Mk, Md	Edwards muck	Ed	Edwards muck, drained
ElA	Elliott silt loam, 0 to 3 percent slopes	ElA	Elliott silt loam, 0 to 3 percent slopes
EsA	Elston loam, 0 to 3 percent slopes	EsA	Elston loam, 0 to 3 percent slopes
Fh, Ak, Ge, Ee, Sh	Fluvaquents	Fh	Fluvaquents
Gf, Gm	Gilford sandy loam	Gf	Gilford sandy loam
HaA, BxA	Hanna sandy loam, 0 to 3 percent slopes	HaA	Hanna sandy loam, 0 to 3 percent slopes
Hk, HkB, Hk, Ha, Au	Haskins loam	HkA	Haskins loam, 0 to 2 percent slopes

PORTER COUNTY, INDIANA --Continued

Field symbols	Field mapping unit name	Publication symbol	Approved mapping unit name
Hm, Mh	Houghton muck	Hm	Houghton muck, ponded
Ho	Houghton muck, drained	Ho	Houghton muck, drained
LyA	Lydick loam, 0 to 2 percent slopes	LyA	Lydick loam, 0 to 2 percent slopes
LyB	Lydick loam, 2 to 6 percent slopes	LyB	Lydick loam, 2 to 6 percent slopes
McA	Markham silt loam, 0 to 2 percent slopes	McA	Markham silt loam, 0 to 2 percent slopes
McB	Markham silt loam, 2 to 6 percent slopes	McB	Markham silt loam, 2 to 6 percent slopes
MfA, MlA	Martinsville loam, 0 to 2 percent slopes	MfA	Martinsville loam, 0 to 2 percent slopes
MfB, MlB	Martinsville loam, 2 to 6 percent slopes	MfB	Martinsville loam, 2 to 6 percent slopes
Mm	Maumee loamy sand	Mm	Maumee loamy sand
Mn	Maumee loamy sand, ponded	Mn	Maumee loamy sand, ponded
MoB, MoA	Metea loamy fine sand, 1 to 6 percent slopes	MoB	Metea loamy fine sand, 1 to 6 percent slopes
Mq, Bo	Milford silty clay loam	Mp	Milford silty clay loam
MrB2	Morley silt loam, 2 to 6 percent slopes, eroded	MrB2	Morley silt loam, 2 to 6 percent slopes, eroded
MrC2	Morley silt loam, 6 to 12 percent slopes, eroded	MrC2	Morley silt loam, 6 to 12 percent slopes, eroded
MrD2, MsD3	Morley silt loam, 12 to 18 percent slopes, eroded	MrD2	Morley silt loam, 12 to 18 percent slopes, eroded

PORTER COUNTY, INDIANA --Continued

Field symbols	Field mapping unit name	Publication symbol	Approved mapping unit name
MrE, MrE2	Morley silt loam, 18 to 30 percent slopes	MrE	Morley silt loam, 18 to 30 percent slopes
MsC3	Morley silty clay loam, 6 to 12 percent slopes, severely eroded	MsC3	Morley silty clay loam, 6 to 12 percent slopes, severely eroded
Va, Mx	Valparaiso loamy sand	Mx	Morocco loamy sand
Nf	Newton loamy fine sand	Nf	Newton loamy fine sand
OaC, OaC2	Oakville fine sand, 4 to 12 percent slopes	OaC	Oakville fine sand, 4 to 12 percent slopes
OaE, OaE2, OaF	Oakville fine sand, 18 to 40 percent slopes	OaE	Oakville fine sand, 18 to 40 percent slopes
Pa	Palms muck	Pa	Palms muck, drained
Pe	Pewamo silty clay loam	Pe	Pewamo silty clay loam
Ph	Pinhook loam	Ph	Pinhook loam
Pk, Bp, G.P.	Pits	Pk	Pits
PlB, PlB2	Plainfield sand, 2 to 6 percent slopes	PlB	Plainfield sand, 2 to 6 percent slopes
PlC, PlC2	Plainfield sand, 6 to 12 percent slopes	PlC	Plainfield sand, 6 to 12 percent slopes
RaB2	Rawson loam, 2 to 6 percent slopes, eroded	RaB	Rawson loam, 2 to 6 percent slopes
RaC2, RaC3	Rawson loam, 6 to 12 percent slopes, eroded	RaC2	Rawson loam, 6 to 12 percent slopes, eroded
RlA	Riddles silt loam, 0 to 2 percent slopes	RlA	Riddles silt loam, 0 to 2 percent slopes

Field symbols	Field mapping unit name	Publication symbol	Approved mapping unit name
FlB2	Riddles silt loam, 0 to 6 percent slopes, eroded	FlB	Fiddles silt loam, 2 to 6 percent slopes
RmC2, RlC2	Riddles loam, 6 to 12 percent slopes, eroded	FmC2	Fiddles loam, 6 to 12 percent slopes, eroded
RmD2, RlD2	Riddles loam, 12 to 18 percent slopes, eroded	RmD2	Fiddles loam, 12 to 18 percent slopes, eroded
Sb, Re, Rg, Sc	Sebewa loam	Sb	Sebewa loam, shaly sand substratum
Rr	Rimer loamy fine sand	Se	Selfridge loamy fine sand
So	Sloan silt loam, sandy substratum	So	Suman silt loam
TcA, OsA	Tracy sandy loam, 0 to 2 percent slopes	TcA	Tracy sandy loam, 0 to 2 percent slopes
TcB, CsB2, RkB2, TcB2	Tracy sandy loam, 2 to 6 percent slopes	TcB	Tracy sandy loam, 2 to 6 percent slopes
TcC, OsC2, RkC2, TcC2	Tracy sandy loam, 6 to 12 percent slopes	TcC	Tracy sandy loam, 6 to 12 percent slopes
TcD, OsD2, RkD2, TcD2	Tracy sandy loam, 12 to 18 percent slopes	TcD	Tracy sandy loam, 12 to 18 percent slopes
TyA, TyB2	Tyner loamy sand, 0 to 3 percent slopes	TyA	Tyner loamy sand, 0 to 3 percent slopes
Ub, Ma	Udorthents, landfill	UbA	Udorthents, 0 to 3 percent slopes
Ua, Ct, C.F.	Udorthents	UcG	Udorthents, loamy, 3 to 30 percent slopes
Uc	Urban land-Blount complex	Uc	Urban land-Blount complex
Ud	Urban land-Brems complex	Ud	Urban land-Brems complex

PORTER COUNTY, INDIANA--Continued

Field symbols	Field mapping unit name	Publication symbol	Approved mapping unit name
Ue	Urban land-Martinsville complex	Ue	Urban land-Martinsville complex
Um	Urban land-Morley complex	UmB	Urban land-Morley complex, 2 to 6 percent slopes
Up	Urban land-Psamments	UpB	Urban land-Psamments complex, 0 to 6 percent slopes
Uw	Urban land-Whitaker complex	Uw	Urban land-Whitaker complex
Wa	Wallkill silt loam	Wa	Wallkill silt loam
We	Warners loam	We	Warners silt loam
Wh	Washtenaw silt loam	Wh	Washtenaw silt loam
Wt, Da	Whitaker loam	Wt	Whitaker loam

Series established by this correlation:

Bourbon (Porter County, Indiana)
Pinhook (La Porte County, Indiana)
Suman (Porter County, Indiana)

Series dropped or made inactive:

Sedley
Valparaiso

Certification Statement:
Porter County is joined by the completed Lake County, Indiana, survey to the west and the La Porte County, Indiana, survey to the east which is nearing completion. Jasper County, Indiana, to the south does not have a modern survey. The field sheets join with both La Porte and Lake Counties. The general soil map joins La Porte, but there are some acceptable differences with Lake County. Porter County has a bottom land association along the Kankakee River which is not recognized in Lake County. Lake County also has a Plainfield-Watseka association which joins an Oakville-Maumee-Brems association in Porter County. Plainfield and Oakville are similar soils and, consequently, this is a join.

The field mapping is completed, the interpretations have been coordinated, and the typical pedons are located in representative areas.

Cooperator Names:
The cooperator block on the front cover will read:

United States Department of Agriculture
Soil Conservation Service
in Cooperation with
Purdue Unversity
Agricultural Experiment Station
and
Indiana Department of National Resources
Soil and Water Conservation Committee

In the box on the inside of the cover the credit line will include the cooperators listed above and the following statement:

"Financial assistance was made available by the Porter County Board of County Commissioners."

Prior Soil Survey Publications:
The following statement will be part of the introductory paragraph: "The first soil survey of Porter County was published in 1916 (ref. citation) but is now out of print. The new survey updates the first survey and provides additional information and larger maps that show the soils in greater detail."

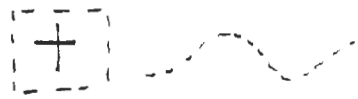
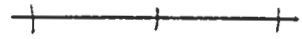
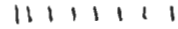
Instructions for Map Compilation:
The conventional symbols used in this survey are those listed in the following Legend of Conventional Symbols. This legend gives general guidelines for deleting, retaining, and combining special symbols used in field mapping. The field sheets will be compiled and the maps finished using the appropriate symbols from SCS-SOILS-37A, dated 3/75.

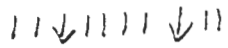
1. County boundary lines, roads, road emblems, and state coordinate ticks are done in accordance with current map finishing procedures and are not illustrated on the conventional and special symbol legend.

2. Short steep slopes, escarpment and gully symbols were not used consistently in the field. They will be evaluated at the time of map compilation and many of them will not be compiled.

3. The minimum size delineation to be compiled is 3 acres.

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

Description	Symbol	Disposition
AD HOC BOUNDARY		Retain
RAILROAD		Retain Do not name.
LEVEES		Retain
DAMS		Retain
PITS		Retain
MISCELLANEOUS CULTURAL FEATURES		
Farmstead, house		Retain
Church		Retain
School		Retain
DRAINAGE		
Perennial, double line		
Perennial, single line		
Intermittent		Retain, use 
Drainage ditch		Retain
LAKES, PONDS AND RESERVOIRS		
Perennial		Retain

Description	Symbol	Disposition
MISCELLANEOUS WATER FEATURES		
Marsh or Swamp		Retain
Wet spot		Retain. Compile as marsh or swamp.
ESCARPMENTS		Retain. Compile as short steep slope. (See note 2)
SHORT STEEP SLOPE		Retain (See note 2)
GULLY		Retain (See note 2)
DEPRESSION OR SINK		Retain
BLOWOUT		Retain
SAND SPOT		Retain
SEVERELY ERODED SPOT		Retain
AD HOC SYMBOLS		
Marl spot, three acres or less		Retain, use ⌀
Muck spot, three acres or less		Retain, use ⊕
Iron spot		Delete
Mucky loam, one for each 20 acres or less		Delete

Approved: October 6, 1978

Maurice Stout, Jr.
Head, Soils Staff
Midwest TSC

CONVERSION LEGEND FOR
PORTER COUNTY, INDIANA
MARCH 1978

Field symbol	Publication symbol	Field symbol	Publication symbol	Field symbol	Publication symbol	Field symbol	Publication symbol
Ad	Ad	McA	McA	PlC2	PlC	We	We
Ag	Ag	McB	McB	RlC2	RmC2	Wh	Wh
AgA	Ag	Md	Ed	RlD2	RmD2	Wt	Wt
Ak	Fh	MfA	MfA	RaB2	RaB		
Au	HkA	MfB	MfB	RaC2	RaC2		
BaA	BaA						
Bo	Mp	Mh	Hm	RaC3	RaC2		
Bp	Pk	Mk	Ed	Re	Sb		
Br	Br	MlA	MfA	Rg	Sb		
Bt	BtA	MlB	MfB	RkB2	TcB		
BtA	BtA	Mm	Mm	RkC2	TcC		
BxA	HaA	Mn	Mn	RkD2	TcD		
C.F.	UcG	MoA	MoB	RlA	RlA		
ChB	ChB	MoB	MoB	RlB2	RlB		
ChC	ChC	Mq	Mp	RmC2	RmC2		
Ct	UcG	MrB2	MrB2	RmD2	RmD2		
Da	Wt	MrC2	MrC2	Rr	Se		
De	De	MrD2	MrD2	Sb	Sb		
DoA	DoA	MrE	MrE	Sc	Sb		
DoB	DoA	MrE2	MrE	Sh	Fh		
Du	Du	MsC3	MsC3	So	So		
Ed	Ed	MsD3	MrD2	TcA	TcA		
Ee	Fh	Mx	Mx	TcB	TcB		
ElA	ElA	NaA	BaA	TcB2	TcB		
EsA	EsA	Nf	Nf	TcC	TcC		
Fh	Fh	OaC	OaC	TcC2	TcC		
Fu	De	OaC2	OaC	TcD	TcD		
G.P.	Pk	OaE	OaE	TcD2	TcD		
Ge	Fh	OaE2	OaE	Tr	DoA		
Gf	Gf	OaF	OaE	TyA	TyA		
Gm	Gf	OsA	TcA	TyB2	TyA		
Ha	HkA	OsB2	TcB	Ua	UaG		
HaA	HaA	OsC2	TcC	Ub	UbA		
Hk	HkA	OsD2	TcD	Uc	Uc		
Hk	HkA	Pa	Pa	Ud	Ud		
HkB	HkA	Pe	Pe	Ue	Ue		
Hm	Hm	Ph	Ph	Um	UmB		
Ho	Ho	Pk	Pk	Up	UpB		
LyA	LyA	PlB	PlB	Uw	Uw		
LyB	LyB	PlB2	PlB	Va	Mx		
Ma	UbA	PlC	PlC	Wa	Wa		

CLASSIFICATION OF PEDONS SAMPLED FOR LABORATORY ANALYSIS

Purdue University Soil Characterization Laboratory

Sampled As	Sample Number	Correlated Name
Del Rey silt loam	S71IN64-2(1-6)*	Del Rey silt loam
Riddles loam	S71IN64-3(1-9)*	Riddles loam
Milford silty clay loam	S71IN64-1(1-8)*	Milford silty clay loam
Elston loam	S76IN127-3(1-8)	Elston loam
Pinhook loam	S76IN127-2-1(1-9)	Pinhook loam
Brady sandy loam	S76IN127-10(1-7)	Brady sandy loam
Tyner loamy sand	S76IN127-9(1-6)	Tyner loamy sand

National Soil Survey Laboratory, Beltsville, Maryland

Tracy sandy loam	S70IND-64 Lab No. 70B 546 70B 555	Tracy sandy loam
Door loam	S70IND-64-2 Lab No. 70B 556 70B 565	Door loam

Indiana State Highway Soil Testing Laboratory

Pinhook loam	S76IN127-001	Pinhook loam
Pinhook loam	S76IN127-004	Pinhook loam

Notes to Accompany
Classification and Correlation
of the Soils of
Porter County, Indiana

by
Louie L. Buller

ADRIAN SERIES
The organic portion of the profile is more acid than typical for the Adrian series. It is not a taxadjunct.

BOURBON SERIES
This is a new series being established by this correlation. The series typical pedon is very strongly acid to a depth of 50 inches, which implies a low base saturation. This series is mapped in association with the Tracy series, which also has low base saturation.

HOUGHTON SERIES
The typical pedon is slightly more acid than listed for the range of the series. This soil is not a taxadjunct.

MARTINSVILLE SERIES
This series is more acid in the lower subhorizons of the solum and in the substratum than defined for the range of the series. This condition is not severe enough to call the series a taxadjunct.

METEA SERIES
In Porter County the series has a subhorizon of sandy loam between the arenic portion of the profile and the coarse-loamy portion of the solum. In a soil like Metea this is a common situation and should be allowed in the official series.

MOROCCO SERIES
The Morocco soils in Porter County have surface horizons which are in the darker end of the range allowed for the series.

PALMS SERIES
This soil is a taxadjunct to the Palms series because the organic upper part of the control section is substantially more acid then typical for the series. Except for the surface layer the pH in calcium chloride is around 3. The typical pedon with the low pH classifies as loamy, mixed, dysic, mesic Terric Medisaprists.

PINHOOK SERIES
This is a new series being established in Porter County with the type location in La Porte County.

SELFRIDGE SERIES

This soil was proposed for correlation as a taxadjunct to the Rimer series because it lacked a fine sandy loam argillic horizon. The Selfridge series from Michigan fit the situation and a taxadjunct was not required. Michigan plans to update the Selfridge series and limits it to soils with less than 35 percent clay in the underlying material. This fits in Porter County.

SEBEWA SERIES

A new series, Sedley, had been proposed, but after evaluating the factors it was decided the situation could be adequately handled as a shaly sand substratum phase of Sebewa. In Porter County this soil has relatively soft gravel size shale fragments in the underlying material and, consequently, the material is not a good source for gravel.

SUMAN SERIES

This is a new series established by this correlation. It is similar to the Sloan series except sand is in the control section above a depth of 40 inches.

TRACY SERIES

The type location is in Porter County. The official series description typical pedon and the one used in the Porter County manuscript must be the same one and they should read the same.

UDORTHENTS

Two units of Udorthents are mapped. The Udorthents, loamy, 3 to 30 percent slopes, delineations are disturbed areas. Many of these areas were formerly called "cut and fill". The parent material is quite variable but most of the material is loamy glacial till. One mapping unit is named Udorthents, 0 to 3 percent slopes. It identifies the covered landfill areas.

WASHTENAW SERIES

The classification for this series is being changed from Typic Haplaquents to Aeric Fluvaquents by this correlation. The typical pedon for this series was originally classified incorrectly.

CLASSIFICATION OF THE SOILS

(An asterisk in the first column indicates a taxadjunct to the series. See notes for a description of those characteristices of this taxadjunct that are outside the range of the series.)

Soil name	Family or higher taxonomic class
Adrian	Sandy or sandy-skeletal, mixed, euic, mesic Terric Medisaprists
Alida	Fine-loamy, mixed, mesic Aquollic Hapludalfs
Blount	Fine, illitic, mesic Aeric Ochraqualfs
Bourbon	Coarse-loamy, mixed, mesic Aquultic Hapludalfs
Brems	Mixed, mesic Aquic Udipsamments
Chelsea	Mixed, mesic Alfic Udipsamments
Del Rey	Fine, illitic, mesic Aeric Ochraqualfs
Door	Fine-loamy, mixed, mesic Ultic Hapludalfs
Edwards	Marly, euic, mesic Limnic Medisaprists
Elliott	Fine, illitic, mesic Aquic Argiudolls
Elston	Coarse-loamy, mixed, mesic Typic Argiudolls
Fluvaquents	Loamy, mixed, mesic Fluvaquents
Gilford	Coarse-loamy, mixed, mesic Typic Haplaquolls
Hanna	Coarse-loamy, mixed, mesic Aquultic Hapludalfs
Haskins	Fine-loamy, mixed, mesic Aeric Ochraqualfs
Houghton	Euic, mesic Typic Medisaprists
Lydick	Fine-loamy, mixed, mesic Mollic Hapludalfs
Markham	Fine, illitic, mesic Mollic Hapludalfs
Martinsville	Fine-loamy, mixed, mesic Typic Hapludalfs
Maumee	Sandy, mixed, mesic Typic Haplaquolls
Metea	Loamy, mixed, mesic Arenic Hapludalfs
Milford	Fine, mixed, mesic Typic Haplaquolls
Morley	Fine, illitic, mesic Typic Hapludalfs
Morocco	Mixed, mesic Aquic Udipsamments
Newton	Sandy, mixed, mesic Typic Humaquepts
Oakville	Mixed, mesic Typic Udipsamments
*Palms	Loamy, mixed, euic, mesic Terric Medisaprists
Pewamo	Fine, mixed, mesic Typic Argiaquolls
Pinhook	Coarse-loamy, mixed, mesic Mollic Ochraqualfs
Plainfield	Mixed, mesic Typic Udipsamments
Rawson	Fine-loamy, mixed, mesic Typic Hapludalfs
Riddles	Fine-loamy, mixed, mesic Typic Hapludalfs

CLASSIFICATION OF THE SOILS--Continued

Soil name	Family or higher taxonomic class
Sebewa	Fine-loamy over sandy or sandy-skeletal, mixed, mesic Typic Argiaquolls
Selfridge	Loamy, mixed, mesic Aquic Arenic Hapludalfs
Suman	Fine-loamy over sandy or sandy-skeletal, mixed, mesic Fluvaquentic Haplaquolls
Tracy	Coarse-loamy, mixed, mesic Ultic Hapludalfs
Tyner	Mixed, mesic Typic Udipsamments
Udorthents	Loamy, mixed, mesic Udorthents
Wallkill	Fine-loamy, mixed, nonacid, mesic Thapto-Histic Fluvaquents
Warners	Fine-silty, carbonatic, mesic Fluvaquentic Haplaquolls
Washtenaw	Fine-loamy, mixed, nonacid, mesic Aeric Fluvaquents
Whitaker	Fine-loamy, mixed, mesic Aeric Ochraqualfs